AMENDMENT TO THE CLAIMS

The listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A multicolor particle analyzer including:

a capillary providing a predetermined volume;

means for projecting a light beam through said capillary to illuminate [[a]] said predetermined volume in said capillary;

means for causing a ~~sample~~ fluid containing sample particles which naturally fluoresce or are tagged to fluoresce and emit light at one or more distinct wavelengths to flow along the capillary through said predetermined volume;

a tunable filter for receiving said light emitted by each particle and repetitively passing light pulses for each wavelength of light emitted by each particle as it passes through said predetermined volume; and

a detector for detecting the output light from said tunable filter and providing an output pulse for each light pulse at each of said multiple wavelengths.

Claim 2 (original): A multicolor particle analyzer as in claim 1 in which the tunable filter is an acousto-optic filter.

Claim 3 (original): A multicolor particle analyzer as in claims 1 or 2 including a detector for detecting light scattered by said particles as they travel through the predetermined volume.

Claim 4 (canceled)

Claim 5 (currently amended): A method of analyzing particles each of which fluoresces and emits light at multiple different distinct wavelengths responsive to excitation light which comprises the steps of:

causing a fluid containing [[the]] particles to be analyzed to flow through an analyzing region in a capillary;

applying excitation light to the analyzing region to cause each particle to emit light at its distinctive wavelengths as it passes through the analyzing region;

receiving the emitted light with a tunable optical filter to repetitively and sequentially pass light at each of said multiple distinct wavelengths; and

detecting the light passed by the filter with a single detector to provide output signals representative of the distinct wavelengths.

Claim 6 (original): The method of claim 5 wherein the particles are caused to flow at a rate such that the light emitted by a particle is passed by the tunable filter a number of times as the particle transits through the analyzing region.

Claim 7 (currently amended): A particle analyzer for analyzing particles in a sample fluid which fluoresce and emit light at one or more wavelengths comprising:

a capillary for receiving [[the]] a sample fluid containing particles to be analyzed and providing a predetermined region;

a pump for causing the sample fluid to flow through the capillary;

a light source for projecting a light beam through the capillary to illuminate [[a]] said predetermined region along the capillary whereby singulated particles flow through the illuminated region and emit fluorescent light at the one or more wavelengths;

a tunable optical filter responsive to tuning pulses for receiving the florescent light and repetitively passing pulses of light at said one or more wavelengths as a particle passes through said region;

a detector for receiving said light pulses and provide an output signal for each of said pulses; and

a processor configured to receive said out signals and provide an output signal representative of the amplitude of each of said one or more fluorescent wavelengths.

Claim 8 (original): A particle analyzer as in claim 7 in which the tunable filter is an acoustic-optic filter.

Claim 9 (currently amended): A method of analyzing particles in a fluid which fluoresce at one or more wavelengths comprising the steps of:

causing [[the]] a fluid containing particles which fluoresce at one or more wavelengths to flow in a capillary past a source of illumination whereby the particles emit fluorescent light at the one or more wavelengths;

~~periodically~~ repetitively detecting the emitted characteristic fluorescence of each of said particles as the particles flow through the illumination source; and

providing output signals representative of the characteristic wavelength of each of said particles.

Claim 10 (currently amended): A method as in claim 9 in which the characteristic fluorescence is detected by ~~periodically~~ repetitively passing the emitted light at each characteristic wavelengths through a filter and detecting the passed emitted light.